

Survey with teachers

Study on 21st century relevance of textbooks and learning content

**Multidisciplinary, Project-based
Digital Learning Content for VET**



VETPROFIT

Content

Methods.....	4
Analysis of the results	5
Personal data	5
Curriculum, textbooks.....	7
Project-based learning	12
Assessment methods	15
Cross-sectoral collaboration	15
Digital learning materials used by the teachers.....	16
Conclusions	22
Annex 1 – Subject of the respondents	24
VET teachers - Hungary	24
VET teachers - Germany.....	24
VET teachers - Italy.....	25
Annex 2– Online questionnaire.....	26




Author: Gábor Lajtos, Mária Hartyányi, iTStudy Hungary Ltd.
Version: V3
Intellectual Output: R1 - Study on 21st century relevance of textbooks and learning content
Date: July 2022
Document Type: Result
File: R1_Survey with teachers_ANALYSIS_Results_2.docx
Reviewed by: Ildikó Balassa, Helén Hegedűs, MAKESZISZ
Target group: Partners
Copyright VETProfit Consortium


This text is published by applying the Creative Commons Free Culture License of Attribution 4.0 International (CC BY-SA)



This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.

CC BY-SA includes the following elements:

BY  – Credit must be given to the creator

SA  – Adaptations must be shared under the same terms

Further information: <https://creativecommons.org/share-your-work/public-domain/freeworks>



Methods

VET plays a key role in preparing young professionals for the challenges of a rapidly evolving global and digital economy. However, education often operates in isolation from the business world, and there is a growing gap between the skills provided by schools and those required by employers. The labour market needs young people with practical knowledge and a variety of transversal skills, and textbooks tend to be dominated by theory, while skills can only be developed through active pedagogical methods.

The needs-analysis included the activities as follows:

- **Desk research** for studying standard curricula and learning materials, textbooks and for gaining a deeper insight into the similarities and differences among the systems of the partner countries.
- **Interview-based survey** by involving relevant stakeholders (teachers, students, and companies) to identify their special needs regarding the learning content, teaching methods and the demand of the companies
- **Online survey with teachers to identify the needs of trainers for learning materials (digital, print), effective use of project-based learning method, assessment methods and digital tools.**

This report includes the result of the online survey what was conducted as a part of the comprehensive needs-analysis in context of the learning outcomes, curricula, learning materials and applied methods of the initial/basic training of the secondary vocational education in three countries, in Hungary, Germany and Italy. VET teachers, students and companies were involved from Agriculture and forestry, IT and telecommunications sectors.

Respondents: VET teachers (teaching theoretical subjects), vocational teachers (teaching practical subjects)

Countries: Italy, Hungary, Germany.

The research questions to answer by the online survey were as follows:

- *Q1: How far the standard textbooks are usable in teaching? Are the textbooks offered for VET are relevant regarding the new trends and changes in the professions?*
- *Q2: Project-based learning method is perceived one of the most relevant teaching methods for the effective vocational education. How far are the teachers experienced in applying PBL in their practice? Are the teachers collaborating in projects with other teachers?*
- *Q3: The 21st century vocational education is called to change the traditional assessment (summative) methods to more innovative methods like peer-evaluation or portfolio-based evaluation. Are the teachers aware of the needs for changes? Are they applying such innovative assessment?*
- *Q4: Digital tools and applications play important role in developing digital skills and transversal skills of students. What kind of tools and how often the teachers applying digital tools in their teaching practice? Are the teachers developing own digital learning materials for their teaching?*

- Q5: Are the teachers aware the needs for fundamental changes regarding teaching methodology, the effective use of technology in developing soft skills, increasing collaboration among the teaching staff?

Analysis of the results

The number of the respondents is 63, the sample is very small and isn't representative, almost the half of the respondents were Hungarian.

Hungary: 30

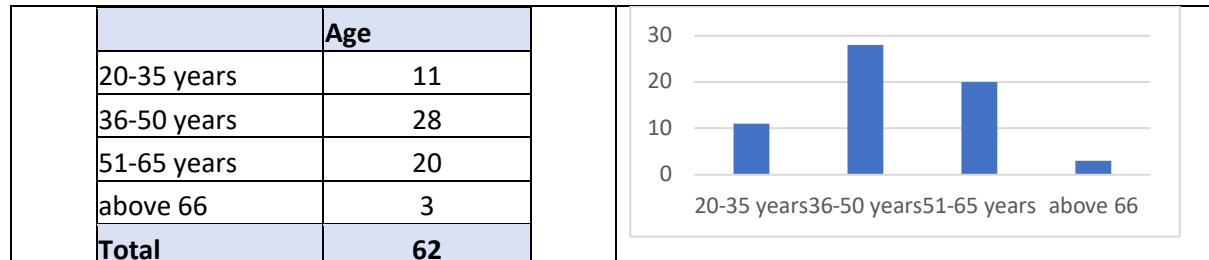
Germany: 12

Italy: 21

The vast majority of the respondents belongs to the age group of 36-50 and 51-66, what is aligned with the general situation on the aging of teaching staff all over Europe. The teaching practice shows more-or-less similar distribution like the age, but while only 11 teachers are in the age group of 20-35, 22 of them have less teaching practice than 5 years. It means, that these teachers might start their carrier in the industry as it is demonstrated by the next table as well. The number of teachers having more than 16 years practice in the industry seems to be relatively high.

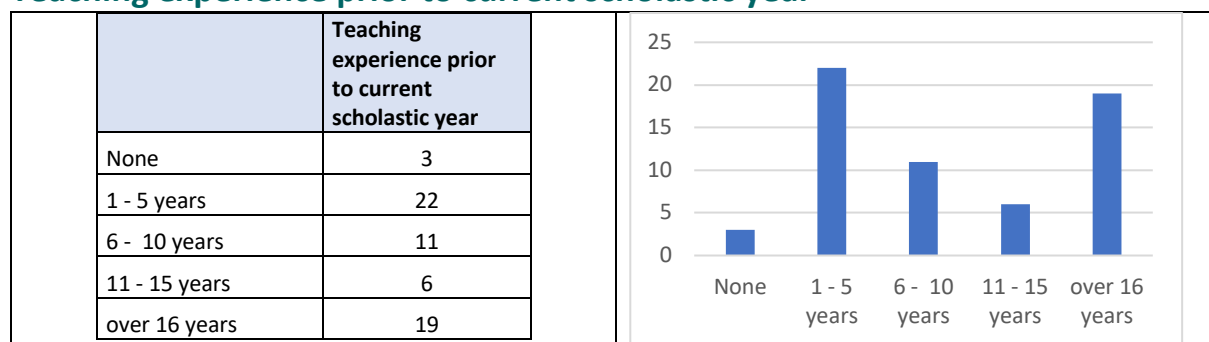
Personal data

Age



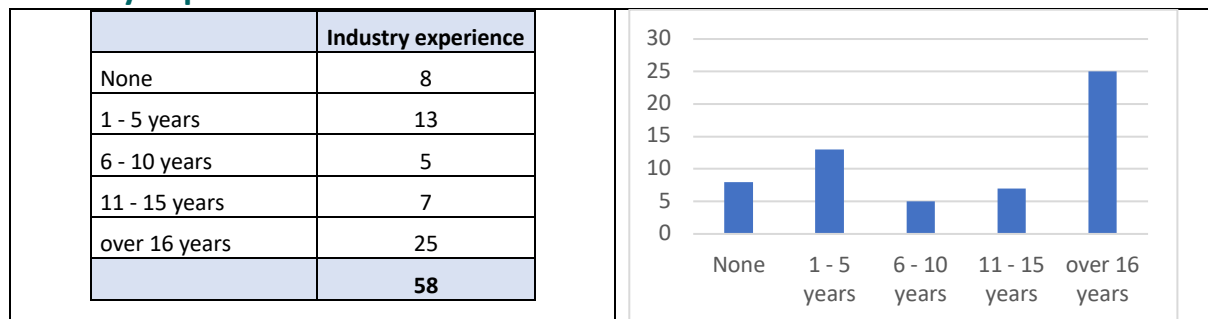
The chart is aligned with the trend experienced not only in Europe, but all over the world: the population of teachers are ageing from year-to-year. The distribution of the age is determined by the majority of age group between 36-65, and the number of young teachers below 35 is very low, only 17%.

Teaching experience prior to current scholastic year



Total	61
--------------	-----------

Industry experience



Which sector do you teach?

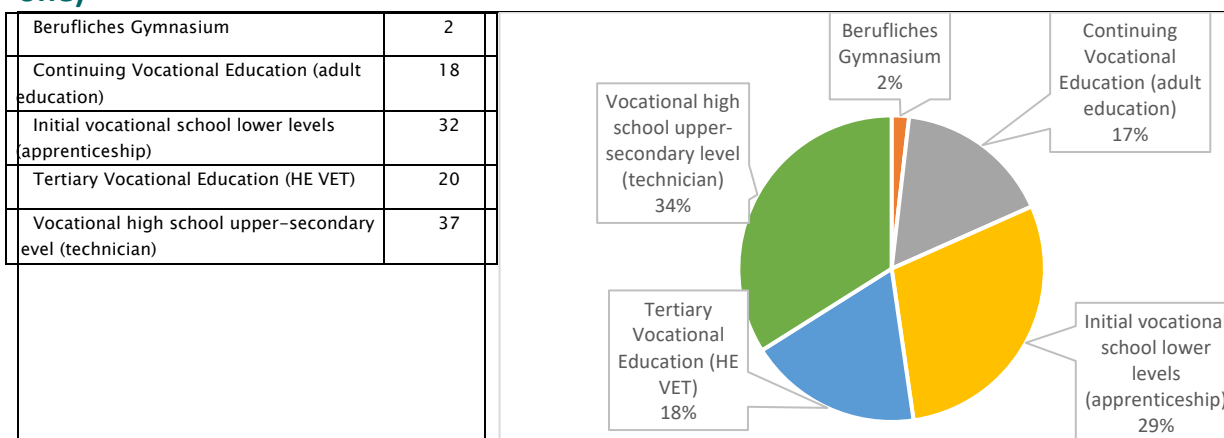
See Annex 1.

Which programme levels do you teach in your school?

	I don't know	EQF Level 1	EQF Level 2	EQF Level 3	EQF Level 4	EQF Level 5	EQF Level 6	EQF Level 7
Germany	4	1	2	4	5	3	4	1
Hungary	13	3	2	3	4	7	2	2
Italy	15	0	0	0	2	2	0	0
Total	32	4	4	7	11	12	6	3

A very surprising figure, that 32 teachers don't know the levels defined by the European Qualification Framework, while each participant countries has developed its national frameworks by adapting EQF to the special feature of its education system.

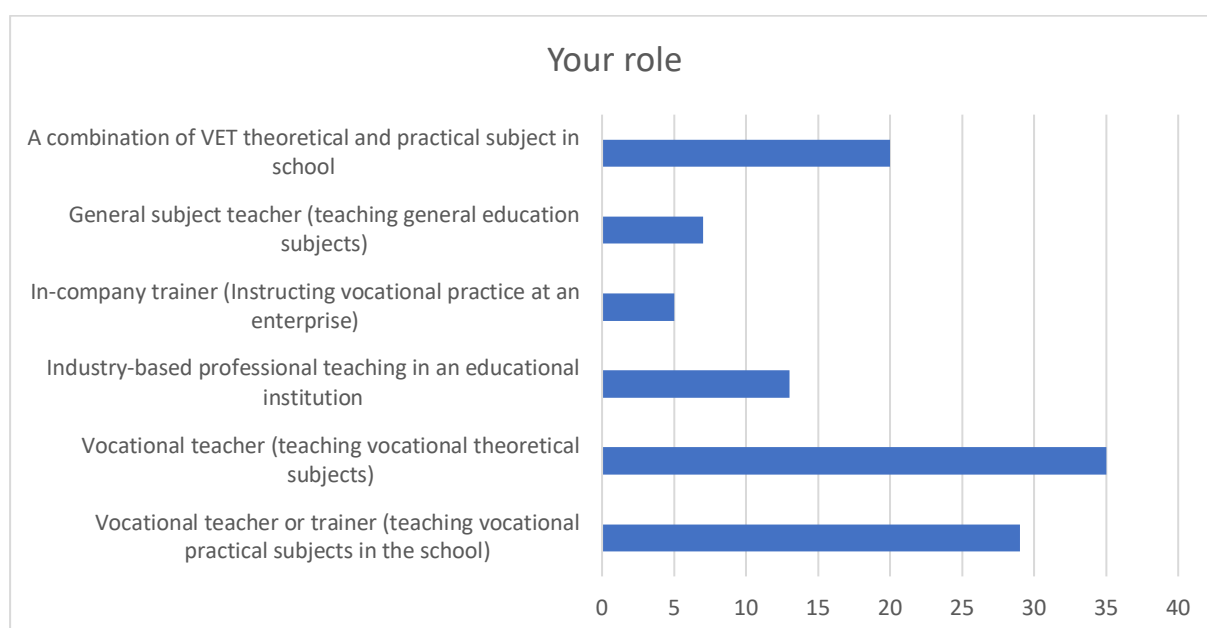
Types of the vocational training in your institution. (You can choose more than one)



The distribution of the different types of VET are balanced almost equally, but the “Berufliches Gymnasium” exists only in Germany (it existed in Hungary till 2019 as well, when the VET system changed).

Your role (You can mark more than one)

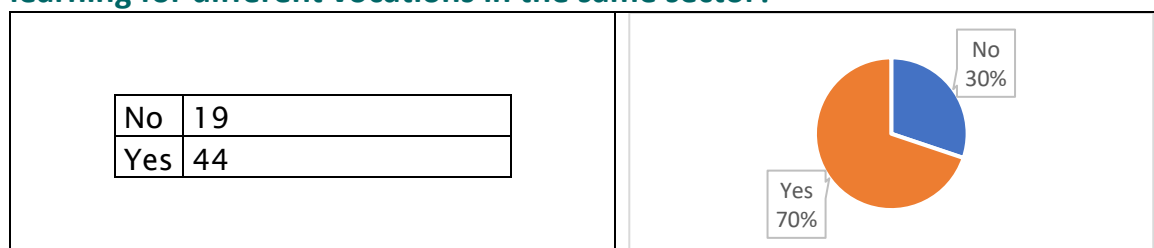
A combination of VET theoretical and practical subject in school	20
General subject teacher (teaching general education subjects)	7
In-company trainer (Instructing vocational practice at an enterprise)	5
Industry-based professional teaching in an educational institution	13
Vocational teacher (teaching vocational theoretical subjects)	35
Vocational teacher or trainer (teaching vocational practical subjects in the school)	29



At this question the multiply choice was allowed, it means that several respondents teach theoretical and practical subjects as well.

Curriculum, textbooks

Is there a common standard “foundation training” for students in your country learning for different vocations in the same sector?

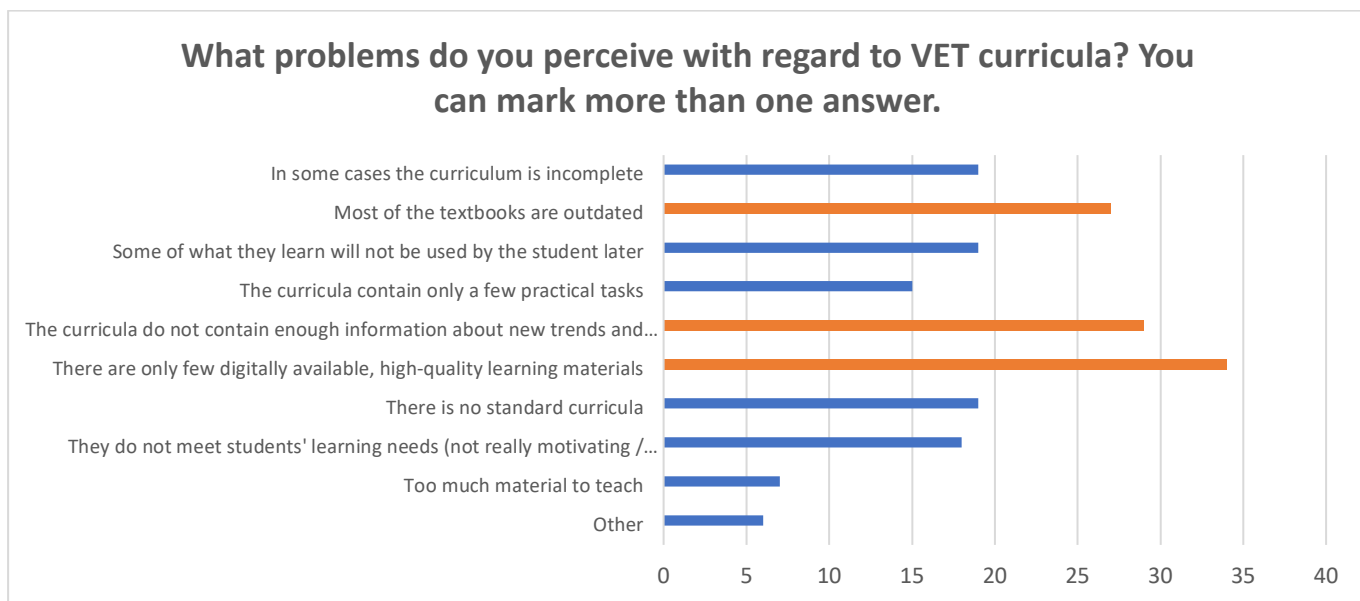


The answers here were important to us, as in VETProfit project the content development focuses on the foundation trainings.

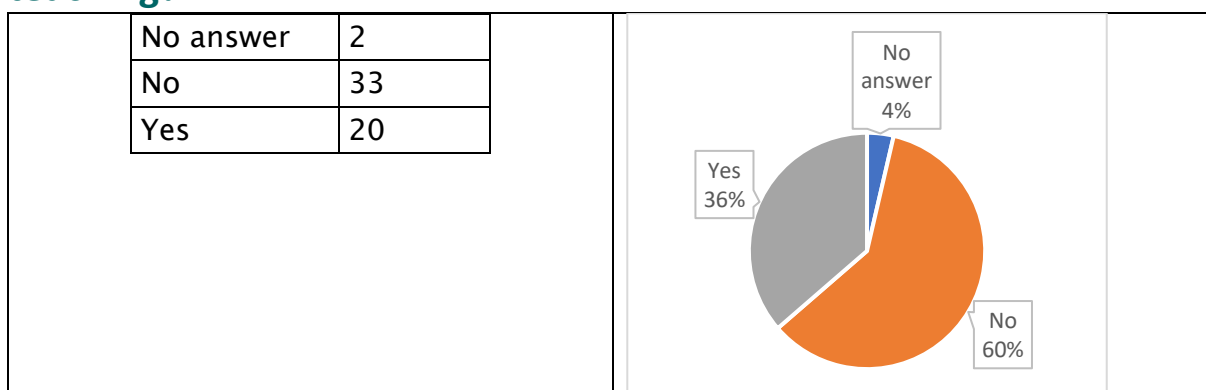
What problems do you perceive with regard to VET curricula? You can mark more than one answer.

In some cases the curriculum is incomplete	19	31%
Most of the textbooks are outdated	27	44%
Some of what they learn will not be used by the student later	19	31%
The curricula contain only a few practical tasks	15	24%
The curricula do not contain enough information about new trends and technologies	29	47%
There are only few digitally available, high-quality learning materials	34	55%
There is no standard curricula	19	31%
They do not meet students' learning needs (not really motivating / interesting)	18	29%
Too much material to teach	7	11%
Other	6	10%

Other
there are no specific teaching materials
No practical opportunities
No textbook
There are no good professional textbooks, often you have to collect the material from several places, which is a lot of work
There is a significant lack of practicality in recent training, due to the focus on exam preparation and preparation for professional competitions, and a lack of practice of many essential practical concepts
There are few tools



Is there an official (compulsory) textbook for the subject you are teaching?

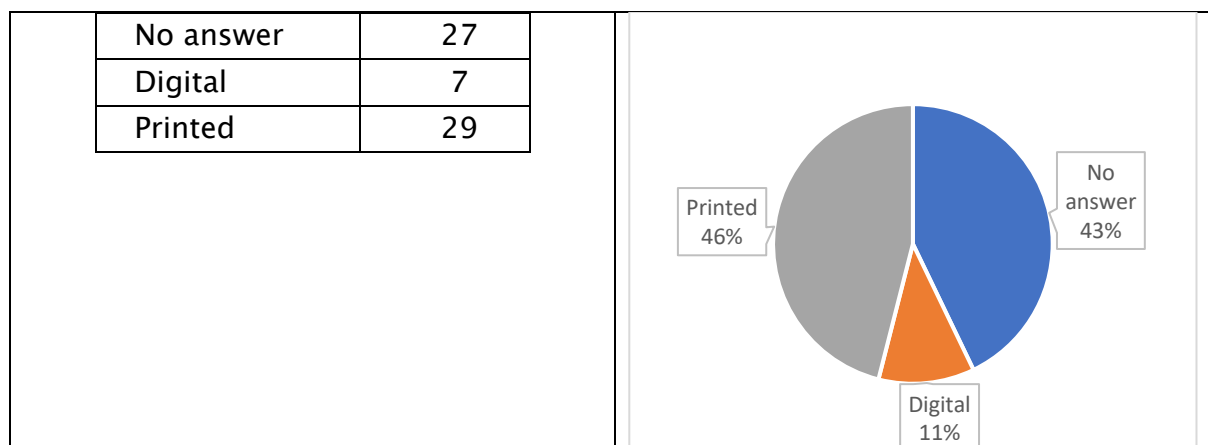


This result gives answer on the first research question:

- *Most of the textbooks are outdated (44%)*
- *The curricula do not contain enough information about new trends and technologies (47%)*
- *There are only few digitally available, high-quality learning materials (55%)*

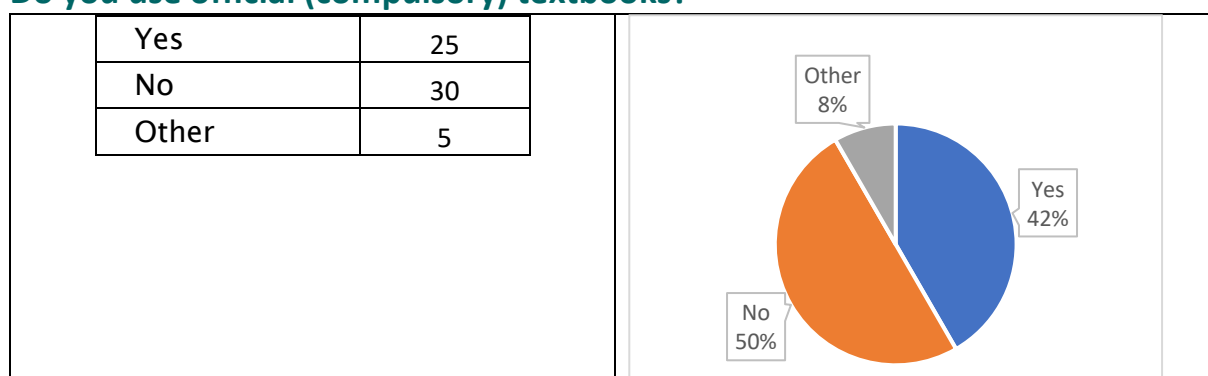
Even if the sample is small, the rate of the respondents selected the options above is so high, that the result can be accepted as significant.

If there is an official (compulsory) textbook, what is it like?



The number of textbooks available in digital form is very low, and the rate of “No answer” (43%) shows the high number of teachers, who do not have any textbook for teaching.

Do you use official (compulsory) textbooks?



Other

I recommend the book, but I also make ppt

appunti (notes)

I will supplement the recommended literature with up-to-date professional literature

Ja

Notes from previous teachers

Nein

No because outdated

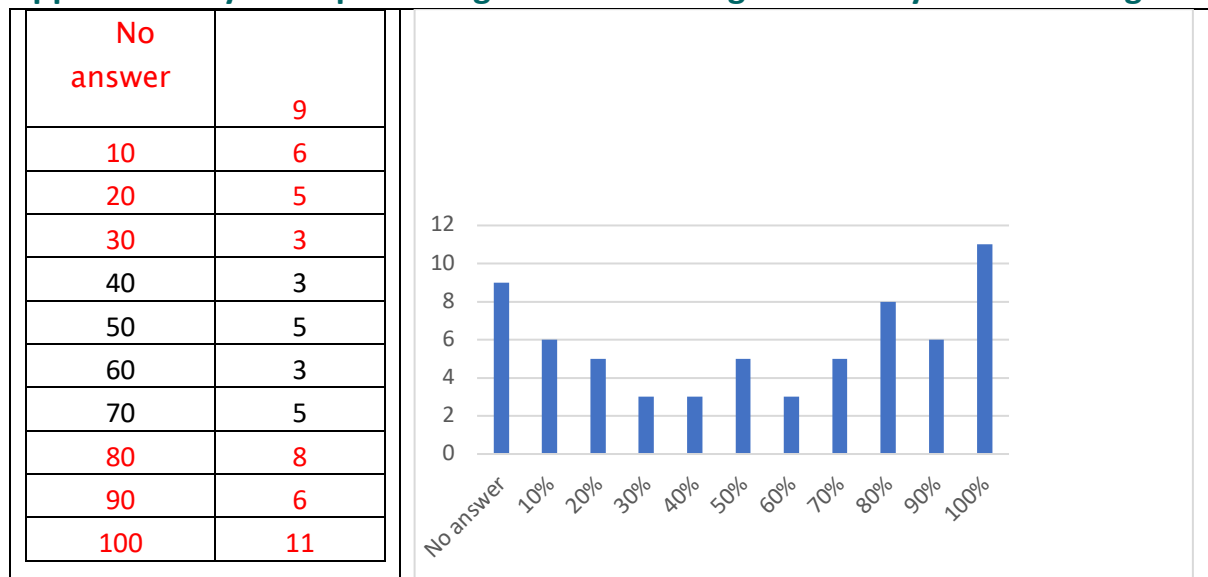
No

We have official and not poor quality printed textbooks available for several subjects, but there are some subjects that unfortunately lack them.

Yes

Both the answers and the remarks underline that VET teachers are forced to develop learning materials in digital forms, if they wanted to keep with the new trends in the vocational professions.

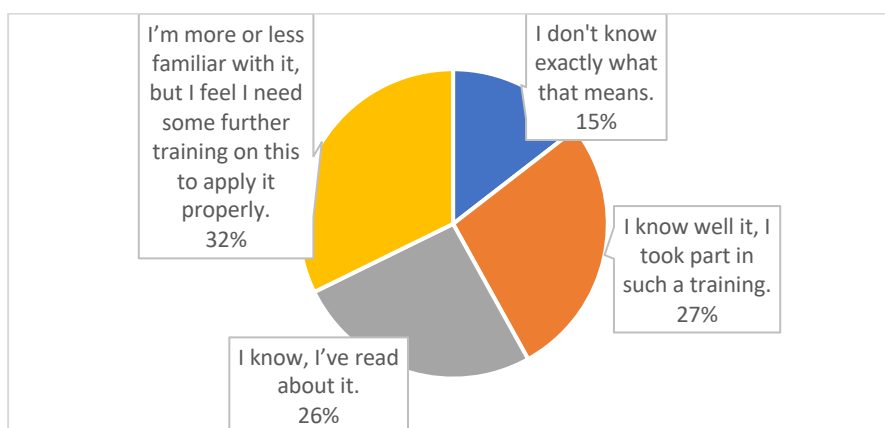
Approximately what percentage of the learning materials you use are digital?



The relatively high number of “No answer” is the rate of teachers, who don’t use digital tool at all. What could be concluding from here it is, that the rate of teachers using digital tools in almost all class is more than 30%, and the rate of using technology rarely is also close to 30% (little bit lower than).

How well do you know the project-based learning / teaching method?

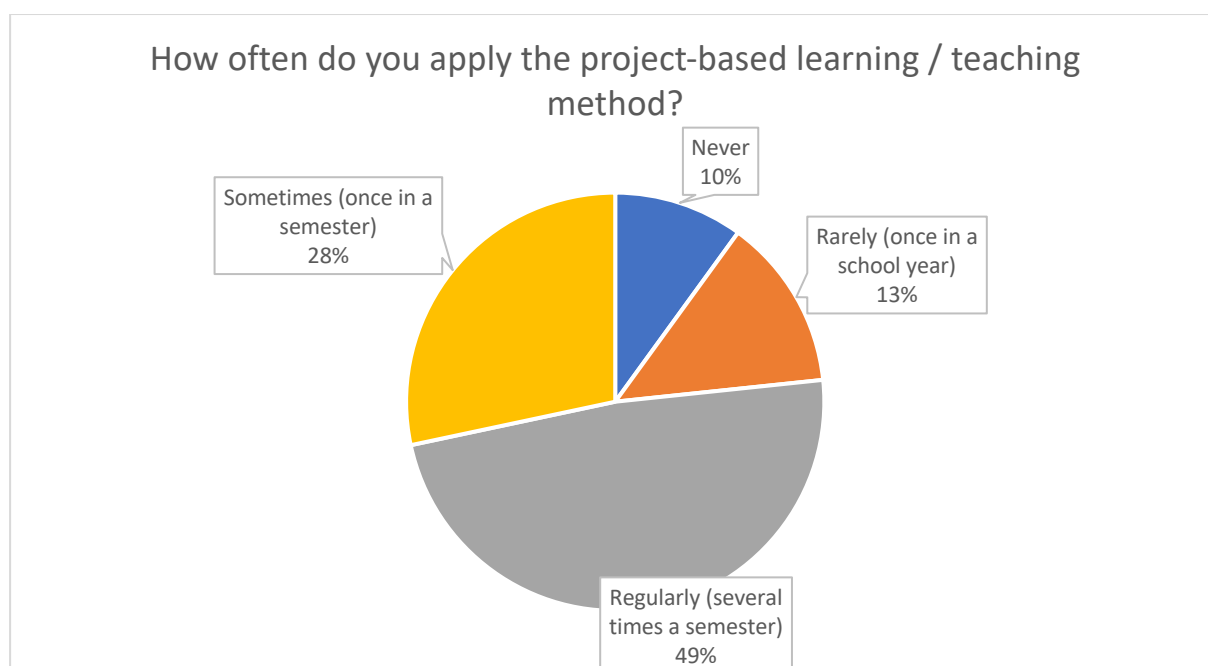
I don't know exactly what that means.	9
I know well it, I took part in such a training.	17
I know, I've read about it.	16
I'm more or less familiar with it, but I feel I need some further training on this to apply it properly.	20



Project-based learning

How often do you apply the project-based learning / teaching method?

Never	6
Rarely (once in a school year)	8
Regularly (several times a semester)	29
Sometimes (once in a semester)	17



The figures of the last two questions give answer the research question Q3: 73% of teachers has very few information about the teaching method project-based learning, and only 49% of them who are running projects with students regularly. The answers here seems to contradict to the results of the former question: how can 49% of the respondents establish projects, if the knowledge about PBL 73% of them was very weak.

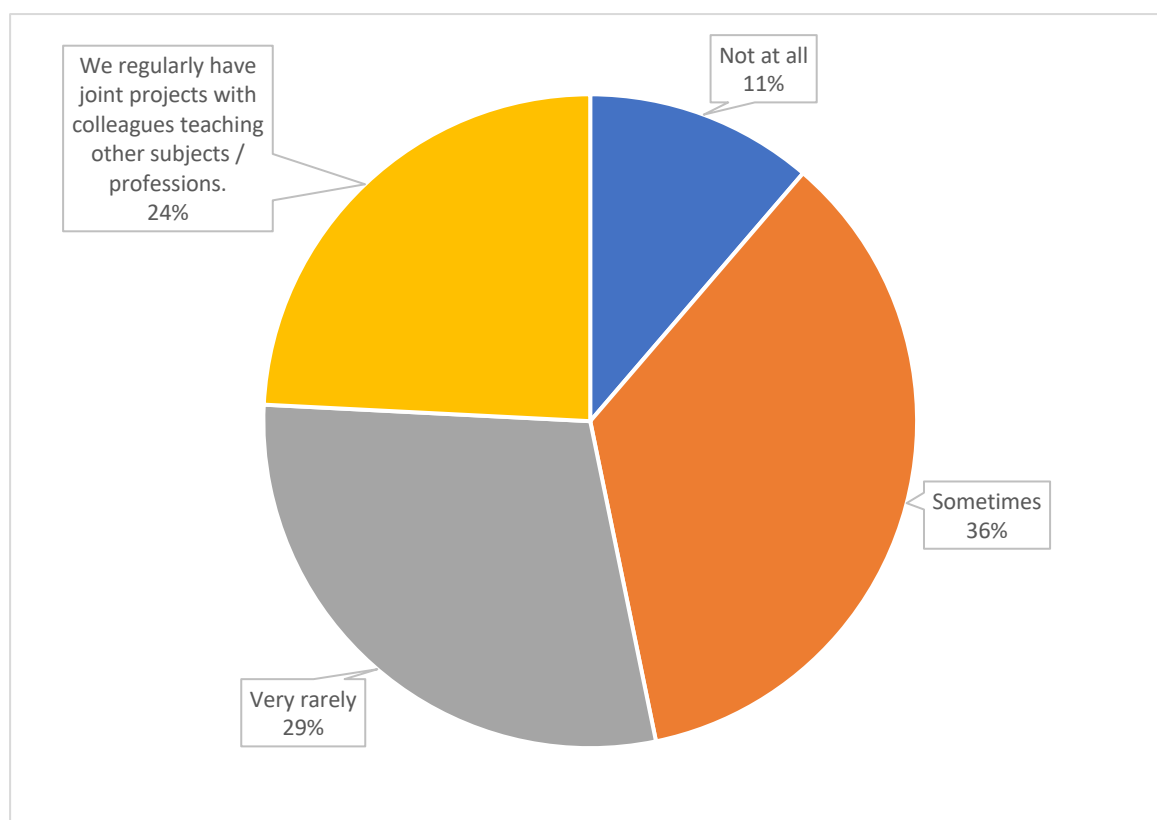
On what topic / subject did you recently launch a new project for your students?

Cloud computing
Experience design
Giochi da tavolo
National talent programme
Creative visual sector, sector showcase project
Board Games
Spotify API
Web application development with Angular

DWVA (cybersecurity)
Off-site location shooting / staged photo
Fashion story
Guided tour
Database management
Tourism
Garden technology, garden construction
Almost all practical subjects in our field are suitable for project-based teaching
Flipit, flipped classroom.
Meteorology, zoology
History of Hungarian horse racing, My digital riding stable
Computer science video production.
Garden design
Ornamental horticulture
Katona József és Kecskemét (Famous Hungarian writer and the city where he was born)
Geodesy
Nature trail creation/plant science, biology, history, geography
Refurbishment of clutches/ power machinery
Folyamatos projektek folynak, de kevés az eszköz a megvalósításhoz
Programming an app
Implementation of a personal/ student's choice prototype computer system that enhances what has been seen throughout the year
Group project work
google app script - business processes
Enterprise management software: ERP-CRM
Mobile application development in industry with two of our clients who volunteered as "guinea pigs"
Direct marketing
Management of a dairy herd
Determination of weeds and grasses
Automation and sensor data control
Mechanics
Temperature-moisture monitoring system with eWON platform
Cattle management
Calf weighing, milk cab, milking, ...
Laying hen management
Redesign of the agricultural school garden

Do you implement joint projects for students, in a collaboration with colleagues teaching other subjects/professions?

Not at all	7
Sometimes	22
Very rarely	18
We regularly have joint projects with colleagues teaching other subjects / professions.	15



The figures show, that the collaborative work in projects isn't in the practice of VET teachers. 89% of the respondents do not run projects together with peer teachers at all, or very rarely.

Assessment methods

Do you apply assessment methods listed below?

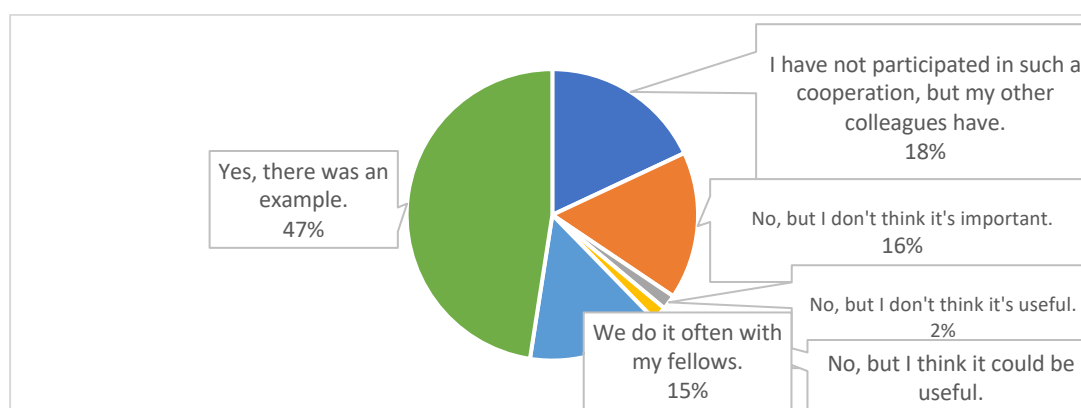
Do you apply assessment methods listed below?	I do not know such methods	I know it, and use sometimes	I use them regularly	I've heard of it, but I don't know how it works
Self-assessment of students	4	28	24	6
Peer review	8	32	11	10
Evaluation of presentation based on predefined criteria, use of checklists	5	20	29	8
Evaluation by portfolio	15	22	14	10

More than 50% of the respondents have no information about the innovative methods, and other 51% who have heard about it but don't know how it works.

Cross-sectoral collaboration

Are there cross-sectoral collaborations in your educational practice?

I have not participated in such a cooperation, but my other colleagues have.	11
No, but I don't think it's important.	10
No, but I don't think it's useful.	1
No, but I think it could be useful.	1
We do it often with my fellows.	9
Yes, there was an example.	29



The figures show, that cross-sectoral collaboration isn't integral part of the partner countries, it can happen sometimes.

**Digital learning materials used by the teachers****Do you use the digital tools and methods listed below?**

	Never	Often	Rarely	Sometimes
I search online content for my professional development	0	58	1	4
We develop digital learning content in a collaboration with my colleagues	11	15	17	19
I reuse digital materials created by my colleagues	9	14	10	29
I join in online educational networks to enhance my digital competences	15	8	17	22
I join online educational networks to enhance my teaching methods	15	7	17	23
I share my own digital materials in teachers' online communities	17	13	13	20
I take part in online professional conferences, virtual meetings	8	12	14	29

The vast majority of the respondents (almost 100%) is searching for online content in teaching however, the collaborative development and reuse of digital content of others happens rarely. The number of respondents who share own digital contents with other teachers is also very low. 87% of the respondents have never joined educational networks or rarely/sometimes and only 13% do it often. We see very similar result on sharing contents in networks.

I search for and reuse freely available digital learning resources relevant for my subjects

I search for and reuse freely available digital learning resources relevant for my subjects	Never	Often	Rarely	Sometimes
Articles, e-books	3	43	3	13
Presentations	1	35	6	21
Simulations	11	16	17	18
Animations	11	12	22	16
Videos	2	36	3	20
Educational films	10	27	12	13
Online games	28	7	11	15
Good practices for projects	11	15	11	22

Regarding the open educational resources, we see more positive attitudes, the teachers prefer online articles (68%), presentations (55%), videos (57%) and educational films (42%). The figures show that most of the teachers aren't familiar online games and don't use them in class.



I create my own digital resources or modify existing ones for my teaching

I create my own digital resources or modify existing ones for my teaching	Never	Often	Rarely	Sometimes
Office documents (PPT, DOC, XLS)	1	47	3	10
Motivating videos, animations	12	7	21	20
Interactive digital assignments	7	16	17	21

Not surprising the dominance of office documents when we asked about the form of digital learning materials the teachers are developing. Even the rate of teachers who creates online quizzes is relatively low: only 25% of them do it often.

I engage my students in

- a) *creating their own digital contents*
- b) *working on digital contents collaboratively*

17 teachers selected only “*creating their own digital contents*”

15 teachers selected only “*working on digital contents collaboratively*”

18 teachers selected both option

The answer wasn’t obligatory. Only 18 The number of teachers who engage the students on both types of activities is very low. Even if adding the figures (18+15=32), the result shows that only 51% of them facilitates “*working on digital contents collaboratively*”, while such skills is highly expected by the labour market.

I guide my students for

- a) *being critical against the online content*
- b) *using digital information only from reliable sources*

11 teachers selected only “*being critical against the online content*”

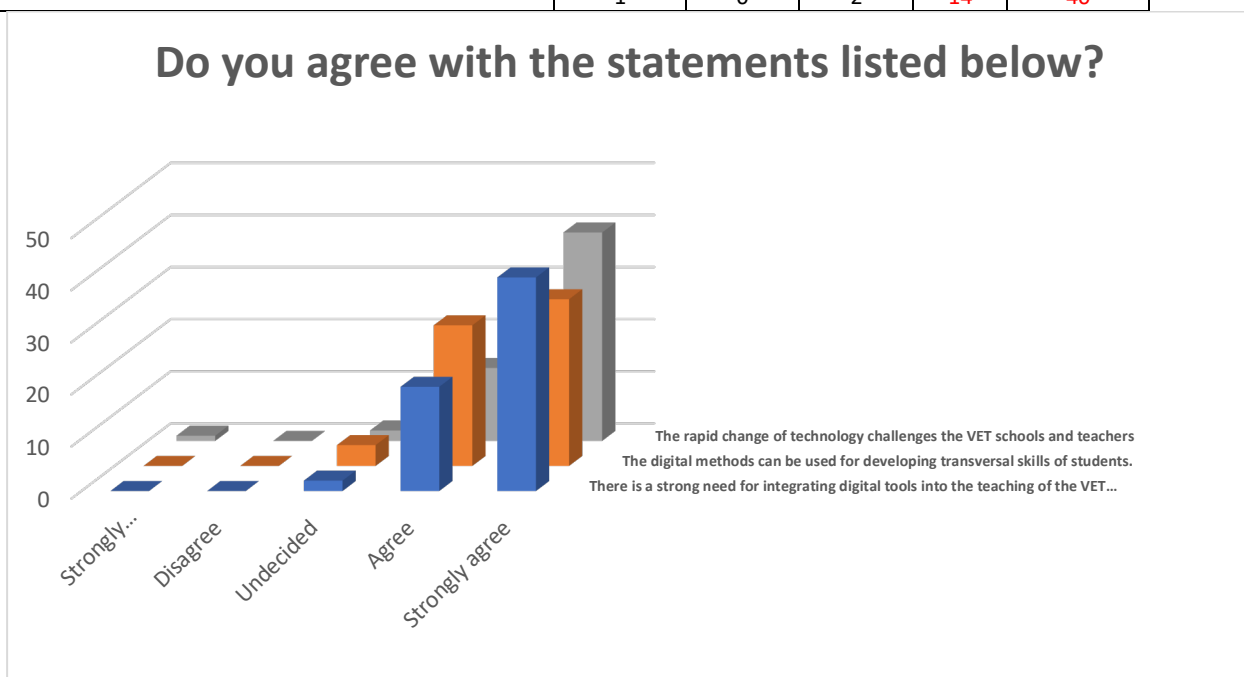
10 teachers selected only “*using digital information only from reliable sources*”

42 teachers selected both option

66% of teachers engage the students on both types of activities, that is positive. From the other side, it might be disappointing that 34% of them think to be important only one of them.

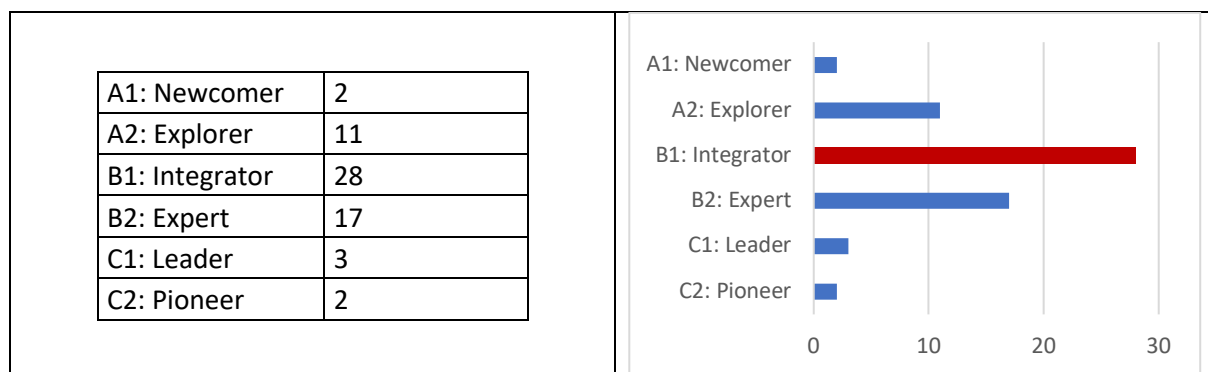
Do you agree with the statements listed below?

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
There is a strong need for integrating digital tools into the teaching of the VET students being members of the Z-generation	0	0	2	20	41
The digital methods can be used for developing transversal skills of students.	0	0	4	27	32
The rapid change of technology challenges the VET schools and teachers	1	0	2	14	40



The high numbers show that the teachers are aware the new learning attitudes of the Z-generation, they understand that the labor market needs workers with soft skills. They also have clear picture on the challenges against the vocational education in the 21st century.

How would you assess your digital competences as teacher (the levels are defined in the DigCompEdu framework developed by the EU for measuring teachers' digital competences)?



The chart form a picture being close to the normal distribution: most of the teachers think that they are middle level of digital competences, and both the numbers belonging to newcomers and expert are lower. Worth to think over, that after 30 years behind us with huge investment into developing the digital skills of teachers, only 34% of them tells having digital competence above middle level.

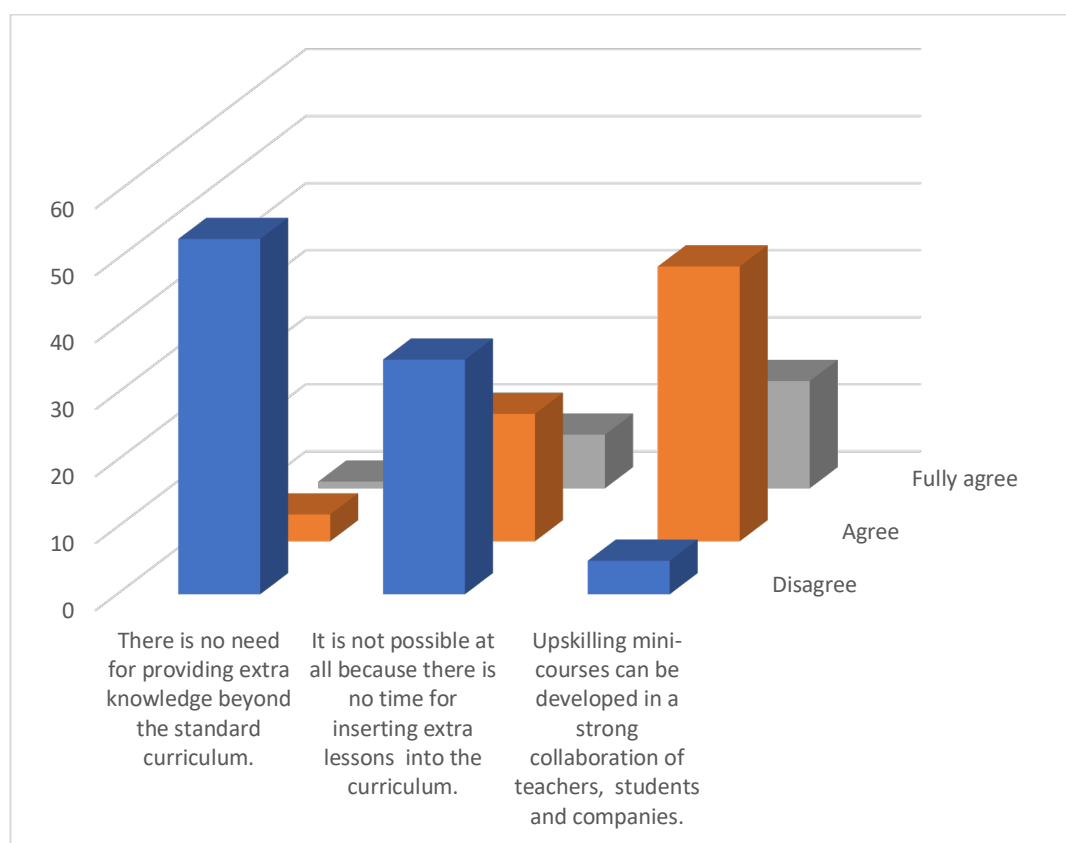
Do you agree with the statements below?

Do you agree with the statements below	Disagree	Agree	Fully agree
There is a gap between the standard curriculum and the professional skills demanded by the labor market	14	35	13
Soft skills of students (like creativity, collaboration, communication, ect.) couldn't be developed by applying traditional, frontal teaching methods.	13	28	21
The teachers are forced to develop their own digital learning material if they want to keep track with the rapid changes of the industry/economy/technology.	5	33	25
There is a strong need for effective collaboration among the teaching staff to deliver relevant knowledge, skills and competences for the students.	1	33	29

The high numbers (agree, fully agree) demonstrate significant judgment of teachers on the statements. Most of them agrees on existing skill gaps, on the need for pedagogical changes, the demand to develop their own digital learning materials, and the urgent call for collaboration. Only some of them think that there are no skill-gaps and soft skills can be developed by frontal teaching as well.

How to provide students with up-to-date knowledge during the training even if it is not included in the curricula but needed by the future employers?

	Disagree	Agree	Fully agree
There is no need for providing extra knowledge beyond the standard curriculum.	53	4	1
It is not possible at all because there is no time for inserting extra lessons into the curriculum.	35	19	8
Upskilling mini-courses can be developed in a strong collaboration of teachers, students and companies.	5	41	16



Please give a score to the statements below. What is important for fundamental changes in vocational schools?

Please give a score to the statements below. What is important for fundamental changes in vocational schools?	Not important	Not very important	Important	Very important	Extremely important
the actors (teachers, school managers, students, companies) have to collaborate,	0	0	16	21	26
the digital skills of teachers have to be developed	0	1	17	25	20
the digital skills of students have to focused on learning	0	6	23	20	13
teachers have to apply less frontal teaching methods	2	6	26	18	11
teachers must have more time for developing their teaching methods	0	2	11	27	22
teaching staff has to be better paid	1	7	11	10	33
project-based methods have to be applied	1	3	16	25	17

The answers strengthen the former results. Surprising that 12% of teachers think not so important the salary, but it can say, that devoted teachers are enthusiastic in their work. But vast majority of the respondents agree that their digital skills have to be improved, the weight of frontal teaching have to be decreased, project method should be applied, and relevant stakeholders have to collaborate as a part of the fundamental changing in the vocational education.

Conclusions

The research questions can be answered by analysing the results of the online survey.

- *Q1: How far the standard textbooks are usable in teaching? Are the textbooks offered for VET are relevant regarding the new trends and changes in the professions?*

Most of the textbooks are outdated, the curricula do not contain enough information about new trends and technologies. (*"The official and good quality printed textbooks available for several subjects, but there are some subjects that unfortunately lack them."*). The teachers are forced to develop their own digital learning material if they want to keep track with the rapid changes of the industry/economy/technology.

The main conclusion from this result is connected to Q4, it demonstrates the need for developing advanced digital competences of teachers. The other very important conclusion cannot be solved inside the schools: beyond the daily routine, the teachers should have more time for creative work and professional development as earlier, and improving their ability for sharing and reusing open educational resources is crucial.

- *Q2: Project-based learning method is perceived one of the most relevant teaching methods for the effective vocational education. How far are the teachers experienced in applying PBL in their practice? Are the teachers collaborating in projects with other teachers?*

The vast majority of teachers claimed that they are not familiar how to apply project-based learning, only a few of them run projects with their students frequently. The collaborative projects with other teachers are not integrative part of the practice of the schools. As PBL is key in vocational education for developing soft skills of students and increasing collaboration with industrial partner, based on the results we can agree, that there is a need for professional developments, trainings for enhancing methodological toolkits of teachers in this field.

- *Q3: The 21st century vocational education is called to change the traditional assessment (summative) methods to more innovative methods like the formative assessment, peer-evaluation or portfolio-based evaluation. Are the teachers aware of the needs for changes? Are they applying such innovative assessment?*

There are teachers who apply innovative assessment methods, but more than 50% of the respondents have no information about the innovative methods, and other 51% who have heard about it but don't know how it works. However, the quality of learning in VET cannot be significantly improved without fundamental changes in assessment the learning outcomes of students. There is a strong need for professional developments with practice-oriented approach of teachers in that field as well.

- *Q4: Digital tools and applications play important role in developing digital skills and transversal skills of students. What kind of tools and how often the teachers applying digital tools in their*

teaching practice? Are the teachers developing own digital learning materials for their teaching?

The teachers are agreeing that digital tools can support developing soft skills of students, however, most of them evaluate their digital competences as middle level. The form of digital learning material is mostly Office document (XLSX, DOCX, PPT), only some of them create advanced digital contents, like videos, online quizzes. They are not collaborating in such developments, and vast majority of them has never joint to online networks. The results clearly shows that there is a strong need for developing their digital competences and utilizing the power of technology in improving learning.

- *Q5: Are the teachers aware the needs for fundamental changes regarding teaching methodology, the effective use of technology in developing soft skills, increasing collaboration among the teaching staff?*

The figures underline that most of the VET teachers are fully aware of the demand for fundamental changes in their teaching methods, they understand that there is a need for innovative approach in pedagogy because of the new learning attitudes of the millennials. They recognised the importance of high-level soft skill to make successful their students on labour market and most of them agree, that applying digital tools is useful for that. At the same time, they say, that they aren't prepared for meet the demand without support, they need more time for developing their teaching methods.

Annex 1 – Subject of the respondents

VET teachers - Hungary

Adatbáziskezelés

Ágazati alapozó képzés mezőgazdaság, informatika.

Agile Methods, Scrum, Project Management FrontEnd development and architecture

Állattartás, állattartás gyakorlat, részletes állattenyésztés, növénytermesztés gyakorlat,

agrár vállalkozási ismeretek, állattartási alapismeretek

általános alapozás, szakmai alapozás, növénytan, dísnövénytermesztés gyakorlat és elmélet

Általános alapozás, szakmai számítások, javításismert elmélet, gyakorlat

Általános alapozás, Termesztéstechnológia, Gazdasági ismeretek, Gazdasági ismeretek gyakorlata.

Felvételnépszerűsítő stúdió, felvételnépszerűsítő utómunka, tervezés gyakorlat, tervezés elmélet, vizuális tervezés elmélet

fogathajtás elmélet-gyakorlat, takarmányozástan, lótenyésztés

Fotográfia

Idegenvezetés, etikett, a turizmus protokollja, kommunikáció

IKT projekt munka, Backend programozás, Hálózat programozás, Weblap készítés, Weblap

programozás, Debugolás, Programozási alapok, Bevezetés az elektronikába,

Árrendezés, térrendezés, technológiai gyakorlat

kerttechnika

kerttervezés, munkavállalói ismeretek, szakmai alapozás, általános alapozás

Kerttervezési alapismeretek (elmélet, gyakorlat) Kerttechnika (elmélet, gyakorlat)

Parkfenntartás (elmélet, gyakorlat) Növényismeret (elmélet, gyakorlat) Ágazati alapozás (elmélet, gyakorlat)

kommunikáció, rendezvényszervezés, protokoll, szabadidő szervezés

Mezőgazdasági erőgépek, CAD ismeretek, mezőgazdasági munkagépek

Műszaki alapismeretek, Műszaki ismeretek, Mezőgazdasági alapozó ismeretek,

Dísnövénytermesztés műszaki ismeretei, Műszaki alapismeretek gyakorlat, Műszaki ismeretek gyakorlat

Neveléstörténet, pedagógia, tanítás-tanulási módszerek, pedagógiai értékelés,

tehetségfejlesztés a szakképzésben

Növényismeret Park fenntartás Vállalkozói ismeretek Munkavédelem Környezetvédelem

Növényismeret, Kerttervezés, Kerttechnika, Parkfenntartás, Geodézia, Ágazati alapozó

ismeretek, Szakmai alapozó ismeretek, Munka-és környezetvédelmi ismeretek, virágkötészet

Magyar nyelv és irodalom

Magyar nyelv és kommunikáció

Szakmai alapozás Általános alapozás Vállalkozási ismeretek Munka és környezetvédelem

Növényismeret

szakmai angol

szakmai idegennyelv, munkavállalói idegennyelv

topográfia, térinformatika, CAD ismeretek, geodézia, távérzékelés, ingatlan-nyilvántartás,

jogi és közigazgatási ism.

Parkgondozó, szőlő, zöldség-termesztő, parképítő technikus

VET teachers - Germany

Pflanzenproduktion

API-FIRST CLOUD COMPUTING

Botanik, Technik, Pflanzenkunde, Pflanzenschutz, Pflanzenernährung

Alles, was mit Nutztieren zu tun hat Deutsch Ausbildung zum Fischwirt, verschiedene Themen
Deutsch Politik Fachkunde für Gärtner:innen
Landwirtschaftliche Lernfelder, Biologie
Hauswirtschaft
Sauen, Mast, FAZ, Brunst und Belegung, Fütterung, Fütterungstechnik, Lüftungstechnik, Rassen, Umgang mit Schweinen, Nottötung
Stationsarbeit ÜA Rind, Unterricht Trockensteher, Kälberaufzucht, Fütterung
Tierhaltung
Tierproduktion
Unternehmensführung Marketing Betriebswirtschaft

VET teachers - Italy

Contabilità
Database, Programmazione in linguaggio Java, Cloud Computing, Big Data, DevOps, React Framework
excel
Experience Design, VR/AR, Cultura d'impresa, Comunicazione, Customer journey
Industrial Internet of Things: corso di base per introdurre i ragazzi nel mondo del monitoraggio industriale e la remotizzazione dei dati
Informatica, Matematica, Meccanica, Sicurezza sul luogo di lavoro
matematica, scienze integrate mecatroniche
Mathematik, Fachtheorie Landwirtschaft, Fachpraxis Landwirtschaft, Fachtheorie
Progettazione, modellazione 3d, falegnameria
Programmazione ad oggetti Programmazione Database Programmazione Web Sicurezza Informatica
Programmazione java
Programmazione orientata agli oggetti
Project management
Strutture per la gestione dei prodotti aziende manifatturiere Logistica nelle aziende manifatturiere
Sviluppo software gestionali Enterprise e Formazione Tecnica
TTPFD e Modellazione IOT
Web development

Annex 2– Online questionnaire

By proceeding, you agree that we will use unidentifiable personal information you provide during the survey to conduct the needs analysis for the project.

- *Yes*
- *No*

Country of VET institution: Germany/Hungary/Italy- None -

Age - None -20-35 years36-50 years51-65 years above 66

Teaching experience prior to current scholastic year –

None -None1 - 5 years6 - 10 years11 - 15 years over 16 years

Industry experience - None -None1 - 5 years6 - 10 years11 - 15 year sover 16 years

Which sector do you teach?


- *Informatics and Telecommunication*
- *Agriculture and Forestry*
- *Other, Please specify*

Which programme levels do you teach in your school?

- *EQF Level 1*
- *EQF Level 2*
- *EQF Level 3*
- *EQF Level 4*
- *EQF Level 5*
- *EQF Level 6*
- *EQF Level 7*
- *EQF Level 8*
- *I don't know*

Types of the vocational training in your institution. (You can choose more than one)

- *Initial vocational school lower levels (apprenticeship)*
- *Vocational high school upper-secondary level (technician)*
- *Tertiary Vocational Education (HE VET)*
- *Continuing Vocational Education (adult education)*
- *Other, please, specify ...*

Is there a common standard “foundation training” for students in your country learning for different vocations in the same sector? 

- Yes
- No



(An example: in Hungary the training of all students learning in the agriculture sector (gardeners, farmers, agrotechnicians, etc.) starts with the same agriculture foundation training.)

Your role (You can mark more than one)

- *General subject teacher (teaching general education subjects)*
- *Vocational teacher (teaching vocational theoretical subjects)*
- *Vocational teacher or trainer (teaching vocational practical subjects in the school)*
- *A combination of VET theoretical and practical subject in school*
- *In-company trainer (Instructing vocational practice at an enterprise)*
- *Industry-based professional teaching in an educational institution*
- *Other (please specify)*

Name the subjects you're currently teaching!

What problems do you perceive with regard to VET curricula? You can mark more than one answer.

- *Too much material to teach*
- *Some of what they learn will not be used by the student later*
- *Most of the textbooks are outdated*
- *The curricula do not contain enough information about new trends and technologies*
- *There is no standard curricula*
- *In some cases the curriculum is incomplete*
- *The curricula contain only a few practical tasks*
- *They do not meet students' learning needs (not really motivating / interesting)*
- *There are only few digitally available, high-quality learning materials*
- *Other, please specify.*

Is there an official (compulsory) textbook for the subject you are teaching?

- *Yes*
- *No*

If there is an official (compulsory) textbook, what is it like?

- *Printed*
- *Digital*

Do you use official (compulsory) textbooks?

- *Yes*
- *No*
- *Other...*

If you do not use the official (compulsory) textbooks, what do you use for teaching? What do you offer your students to learn from?

Approximately what percentage of the learning materials you use are digital?

If relevant, please name subjects for which there is no good quality, up-to-date learning material at all.

If relevant, please name such subjects, name the topics where you feel the need to modernize and digitize the curriculum.





If the curriculum needs to be supplemented, where can you find such? Please provide links to the online platform from which you usually use materials.

List the specific applications and editing tools that you use regularly and confidently to create digital learning elements.

How well do you know the project-based learning / teaching method?

- *I know well it, I took part in such a training.*
- *I know, I've read about it.*
- *I'm more or less familiar with it, but I feel I need some further training on this to apply it properly.*
- *I don't know exactly what that means.*
- *Other...*

How often do you apply the project-based learning / teaching method?

- *Regularly (several times a semester)*
- *Sometimes (once in a semester)*
- *Rarely (once in a school year)*
- *Never*

On what topic / subject did you recently launch a new project for your students? Do you implement joint projects for students, in a collaboration with colleagues teaching other subjects/professions?

- *Not at all*
- *Very rarely*
- *Sometimes*
- *We regularly have joint projects with colleagues teaching other subjects / professions.*

Do you apply assessment methods listed below?

(I use them regularly I know it, and use sometimes I've heard of it, but I don't know how it works I do not know such methods)

- *Self-assessment of students*
- *Peer review*
- *Evaluation of presentation based on predefined criteria, use of checklists*
- *Evaluation by portfolio*

Are there cross-sectoral collaborations in your educational practice?

- *No, but I don't think it's useful.*
- *No, but I don't think it's important.*
- *I have not participated in such a cooperation, but my other colleagues have.*
- *Yes, there was an example.*
- *We do it often with my fellows.*

Do you use the digital tools and methods listed below?

Often Sometimes Rarely Never

- *I search online content for my professional development*
- *We develop digital learning content in a collaboration with my colleagues*





- *I reuse digital materials created by my colleagues*
- *I join in online educational networks to enhance my digital competences*
- *I join in online educational networks to enhance my teaching methods*
- *I share my own digital materials in teachers' online communities*
- *I take part in online professional conferences, virtual meetings*

I search for and reuse freely available digital learning resources relevant for my subjects

Often Sometimes Rarely Never

- *Articles, e-books*
- *Presentations*
- *Simulations*
- *Animations*
- *Videos*
- *Educational films*
- *Online games*
- *Good practices for projects*

I create my own digital resources or modify existing ones for my teaching

- *Office documents (PPT, DOC, XLS)*
- *Motivating videos, animations*
- *Interactive digital assignments*

I engage my students in

- *creating their own digital contents*
- *working on digital contents collaboratively*

I guide my students for

- *using digital information only from reliable sources*
- *being critical against the online content*

Do you agree with the statements listed below?

- *There is a strong need for integrating digital tools into the teaching of the VET students being members of the Z-generation*
- *The digital methods can be used for developing transversal skills of students.*
- *The rapid change of technology challenges the VET schools and teachers*

How would you assess your digital competences as teacher (the levels are defined in the DigCompEdu framework developed by the EU for measuring teachers' digital competences)

- *A1: Newcomer*
- *A2: Explorer*



Project Summary

Multidisciplinary, Project-based Digital Learning Content for VET

Basic data

Title: Multidisciplinary, Project-based Digital Learning Content for VET

Acronym: VETPROFIT

Project ID: 2021-1-HU01-KA220-VET-000025350

Partner countries: Germany, Italy, Hungary

Coordinator: iTStudy Hungary Ltd.

Duration: 01 November 2021 – 31 October 2024.

Background

Vocational education and training (VET) has a key role to play in preparing young professionals for the challenges of a rapidly evolving global and digital economy. However, education often operates in isolation from the business world, with a widening gap between the skills provided by schools and those required by employers.

The labour market needs practical knowledge, and textbooks tend to be dominated by theory. Textbooks are not motivating enough for students born into the digital world and contain very few real-life examples from work situations. While most workplaces expect staff to work in a project-oriented way, the project approach and its associated forms of work are still not integrated into training, and a significant number of trainers are not yet prepared to apply the project approach. The multidisciplinary approach is difficult to integrate with traditional teaching methods, even though young graduates need to apply knowledge and skills from different subjects at the same time to solve workplace problems. While employers expect prospective employees to work in teams and on projects, the project method and related forms of work are not widespread in VET and project-based teaching methods are often missing from the toolbox of VET teachers.

Target groups

- VET- schools' leadership
- VET teachers/trainers
- Companies (Agriculture and IT sectors)

Beneficiaries

- VET students
- Employers

Objectives

The aim of the project is to reflect the needs of the labour market in vocational education and training, to prepare teachers to work with companies to develop project tasks for students and future employees to solve real problems proposed by them. To achieve this objective, the partnership:

- *review the curriculum, learning materials and teaching methods used in the initial training of IT and Agricultural sectors in the partner countries.*

- *train VET teachers of these sectors about the project method, related digital tools, innovative assessment practices and digital content creation.*
- *assign real-life project tasks for VET students, in close collaboration of teachers and labor market representatives.*
- *create a repository of project-based, re-usable, high-quality, motivating digital learning contents with an interdisciplinary approach.*
- *prepare students for successful project implementation by designing and delivering mini courses for them;*
- *create a model to be published as a guide for teachers of other VET institutes.*

Results

R1 – A study on 21st century relevance of textbooks and learning content

R2 - PBL with interdisciplinary approach – blended course for VET teachers

R3 - Labor market-oriented projects for students

R4 - Repository of re-usable digital micro-learning content for VET

R5 - Mini-courses and projects for VET students

R6 - Methodology of developing, publishing and re-using digital micro-learning contents – a guide for VET expert teachers

Partners

iTStudy Hungary IT Education and Research Centre. Hungary

DEULA - Nienburg GmbH, Germany

Fondazione ITS – JobsAcademy, Italy

Association of Hungarian Horticultural Vocational Training Institutions, Hungary

Premontre Vocational High School, Technical School and College, Hungary

Discovery Center Nonprofit Ltd., Hungary